

Amendment and Response under 37 C.F.R. 1.116

Applicant: Samuel C. Ramey et al.

Serial No.: 09/529,032

Filed: April 5, 2000

Docket No.: 57174US006

Title: MODULE HEADER APPARATUS

IN THE CLAIMS

No claims are amended with this Response.

1. (Previously Presented) A header connector apparatus configured to receive an electronic card, the apparatus comprising:
 - a body having first and second spaced apart side arms formed integrally with the body and configured to receive the card therebetween, the first side arm having a longitudinally extending first dovetail member;
 - an actuator button having a longitudinally extending second dovetail member configured to mate with the first dovetail member to allow the button to move longitudinally relative to the body; and
 - a monolithic ejector mechanism coupled to the body and the button, the monolithic ejector mechanism being configured to eject the card from the body upon longitudinal movement of the button relative to the body.
2. (Original) The header connector apparatus of claim 1, wherein the ejector mechanism includes a pivot cam configured to engage the body so that movement of the button relative to the body causes the ejector mechanism to pivot about the pivot cam to eject the card.
3. (Original) The header connector apparatus of claim 2, wherein the button includes a notch and the ejector mechanism includes a flange, the notch being configured to receive a portion of the flange therein to couple the button to the ejector mechanism.
4. (Original) The header connector apparatus of claim 1, wherein the monolithic ejector mechanism is stamp formed from a sheet of metal material.
5. (Original) The header connector apparatus of claim 1, wherein the body is formed to include an opening adjacent the second arm, the button is formed to include a

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notch portion, and the ejector mechanism includes first and second opposite flanges, the first flange being located in the notch portion of the button to couple the ejector mechanism to the button, and the second flange extending through the opening formed in the body adjacent the second arm the ejector mechanism also having a pivot cam positioned between the first and second flanges so that movement of the button causes the ejector mechanism to pivot about the pivot cam to eject the card.

6. (Original) The apparatus of claim 5, wherein the body includes a curved portion configured to receive the pivot cam.
7. (Original) The apparatus of claim 6, wherein the body is formed to include a lip located between the first and second side arms, the lip being configured to extend over an edge of the ejector mechanism adjacent the cam.
8. (Original) The apparatus of claim 5, wherein the first flange includes a downwardly extending portion located in the notch and an outwardly extending portion located below the button, and the opening in the body portion is formed by an elongated bar, the second flange being formed to include a downwardly extending portion extending through the opening and an outwardly extending portion extending under the bar.
9. (Original) The apparatus of claim 1, wherein the button includes a first member coupled to the first side arm of the body, and a pressing part coupled to the first member, the pressing part being configured to be engaged by an operator to move the first member and the pressing part relative to the body.
10. (Original) The apparatus of claim 9, further comprising at least one detent formed on one of the first member and the pressing part to secure the first member to the pressing part upon insertion of the pressing part on to the first member.

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11. (Original) The apparatus of claim 10, wherein the detent includes a domed surface formed on the first member which is configured to enter an aperture formed in the pressing part.
12. (Original) The apparatus of claim 9, wherein the pressing part includes first and second spaced apart spring arms, each spring arm being formed to include an aperture therein, and the first member includes upper and lower domed surfaces configured to enter the apertures in the spring arms upon insertion in the pressing part on to the first member.
13. (Previously Presented) The apparatus of claim 9, wherein the pressing part includes a slot configured to slide over an end of the first member, the pressing part including at least one lead-in ramp surface adjacent the slot to facilitate installation of the pressing part over the first member.
14. (Previously Presented) A header connector apparatus configured to receive an electronic card, the apparatus comprising:
 - a body having first and second spaced apart side arms configured to receive the card therebetween, the body being formed to include an opening adjacent the second arm;
 - a button coupled to the first arm, the button being configured to move relative to the first arm, the button being formed to include a notch portion; and
 - a monolithic ejector mechanism having first and second opposite flanges, the first flange being located in the notch portion of the button to couple the ejector mechanism to the button, the second flange extending through the opening formed in the body adjacent the second arm, the ejector mechanism also having a pivot cam positioned between the first and second flanges so that movement of the button causes the ejector mechanism to pivot about the pivot cam to eject the card.
15. (Original) The apparatus of claim 14, wherein the body includes a curved portion configured to receive the pivot cam.

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16. (Original) The apparatus of claim 15, wherein the pivot cam has a curved outer surface and the curved portion of the body has substantially the same radius as the outer surface of the pivot cam.
17. (Original) The apparatus of claim 14, wherein the body is formed to include a lip located between the first and second side arms, the lip being configured to extend over an edge of the ejector mechanism adjacent the cam.
18. (Original) The apparatus of claim 14, wherein the ejector mechanism includes a downwardly extending tab configured to engage an end edge of the card to eject the card from the header.
19. (Original) The apparatus of claim 14, wherein the ejector mechanism includes an upturned front edge.
20. (Original) The apparatus of claim 14, wherein the ejector mechanism includes a ramp surface adjacent the first flange.
21. (Original) The apparatus of claim 20, wherein the ejector mechanism includes a stop located adjacent the ramp surface.
22. (Original) The apparatus of claim 14, wherein the first flange includes a downwardly extending portion located in the notch and an outwardly extending portion located below the button.
23. (Original) The apparatus of claim 14, wherein the opening in the body portion is formed by an elongated bar, the second flange being formed to include a downwardly extending portion extending through the opening and an outwardly extending portion extending under the bar.

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24. (Original) The apparatus of claim 14, wherein the first side arm includes a longitudinally extending first dovetail member, and the button includes a longitudinally extending second dovetail member configured to mate with the first dovetail member to allow the button to move longitudinally relative to the body.
25. (Original) The apparatus of claim 14, wherein the button includes a first member coupled to the first side arm of the body, and a pressing part coupled to the first member, the pressing part being configured to be engaged by an operator to move the first member and the pressing part relative to the body.
26. (Original) The apparatus of claim 25, further comprising at least one detent formed on one of the first member and the pressing part to secure the first member to the pressing part upon insertion of the pressing part on to the first member.
27. (Original) The apparatus of claim 25, wherein the detent includes a domed surface formed on the first member which is configured to enter an aperture formed in the pressing part.
28. (Original) The apparatus of claim 25, wherein the pressing part includes first and second spaced apart spring arms, each spring arm being formed to include an aperture therein, and the first member includes upper and lower domed surfaces configured to enter the apertures in the spring arms upon insertion in the pressing part on to the first member.
29. (Original) The apparatus of claim 25, wherein the pressing part includes a slot configured to slide over an end of the first member, pressing part including at least one lead-in ramp surface adjacent the slot to facilitate installation of the pressing part over the first member.
30. (Withdrawn) An actuator button apparatus for an electrical connector, the apparatus comprising:

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a first member coupled to the connector for movement relative to the connector to an actuation position; and
a pressing part coupled to the first member, the pressing part being configured to be engaged by an operator to move the first member and the pressing part relative to the connector.

31. (Withdrawn) The apparatus of claim 30, further comprising an ejector mechanism coupled to the connector and the first member of the button, the ejector mechanism being configured to eject an electronic card from the connector upon movement of the first member and the pressing part relative to the connector.
32. (Withdrawn) The apparatus of claim 30, further comprising at least one detent formed on one of the first member and the pressing part to secure the first member to the pressing part upon insertion of the pressing part on to the first member.
33. (Withdrawn) The apparatus of claim 32, wherein the detent includes a domed surface formed on the first member which is configured to enter an aperture formed in the pressing part.
34. (Withdrawn) The apparatus of claim 30, wherein the pressing part includes first and second spaced apart spring arms, each spring arm being formed to include an aperture therein, and the first member includes upper and lower domed surfaces configured to enter the apertures in the spring arms upon insertion in the pressing part on to the first member.
35. (Withdrawn) The apparatus of claim 30, wherein the first member is formed to include a guide bar, and the pressing part is formed to include a slot configured to slide over the guide bar of the first member to couple the pressing part to the first member.

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36. (Withdrawn) The apparatus of claim 35, wherein the guide bar and the slot each have generally rectangular shapes.
37. (Withdrawn) The apparatus of claim 35, further comprising a detent formed on one of the guide bar and the pressing part to secure the pressing part to the first member.
38. (Withdrawn) The apparatus of claim 30, wherein the pressing part includes a slot configured to slide over an end of the first member, pressing part including at least one lead-in ramp surface adjacent the slot to facilitate installation of the pressing part over the first member.